

Cheat Yo' Self

A web application designed to slim thighs and save lives

By

All Hail the Machine Overlords

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Problem?

Many diets impose restrictions on macronutrients, calorie restrictions, or types of foods allowed. These restrictions make restaurant trips difficult. Many prefer to forgo the trip to the restaurant or cheat on the diet as a result. This results in a loss of business for the restaurant and an inconvenience for the dieter.

Project Solution Proposal

Our team built a web application that...

1. Stores restaurant menus with nutritional information
2. Scans menus for acceptable dietary choices based on user input
3. Allows users to filter options based on food restrictions
4. Employs computational strategies to locate dietary options that satisfy the user input and minimize the monetary cost.

Technical Details

- Application server built using the Django framework version 2.2.5
- The backend calculates combinations using the Python 3.5 built in combinatorics library
- Tables were implemented with the JQuery dataTables module version 1.10.20
- The team used HTML, javascript, CSS, and the Django templating library to create searchable dynamic content

The Algorithm

- User searches potentially yield billions of combinations
- The team constrained the output to a manageable size with user input and the exclusion of unlikely combinations
- A custom algorithm runs on the backend to systematically eliminate combinations before combinatorial calculations take place increasing calculation runtimes
- These precautions result in a fast and meaningful search



DEMO

<http://cheatyoself.com>

<http://ec2-18-207-125-3.compute-1.amazonaws.com> (backup)



Software/Tools Utilized



Future Scope

- User Accounts
- Improve UI(cleaner tables, improved icons less empty space)
- Inclusive of more diets(paleo, keto, vegan, etc.)
- Improve the database to include more restaurant options(i.e. off-campus)

Carls Jr Menu

Set Nutritional Parameters >>

Find Similar:

Show: 10 entries

	Item	Allergens	Price	Calories	Carbs	Search:	Protein	Fat
<input checked="" type="checkbox"/>	The 1/2 lb. Gasconade Bacon Thickburger	    	\$7.99	1300	31		49	89
<input checked="" type="checkbox"/>	The 1/2 lb. Jalapeno Thickburger	    	\$7.99	1020	49		48	79
<input checked="" type="checkbox"/>	Beant Swiss Crispy Chicken Sandwich	    	\$7.99	710	54		41	41
<input checked="" type="checkbox"/>	The 1/2 lb. Gasconade Bacon Thickburger	    	\$6.86	950	50		39	67
<input checked="" type="checkbox"/>	The 1/2 lb. Original Six Dollar Thickburger	    	\$6.79	980	33		46	59
<input checked="" type="checkbox"/>	The 1/2 lb. Lettuce-Wrapped Thickburger	    	\$6.79	630	9		38	33
<input checked="" type="checkbox"/>	All-Natural Charbroiled Chicken Salad	   	\$6.79	280	16		11	9
<input checked="" type="checkbox"/>	The 1/2 lb. Jalapeno Thickburger	    	\$6.65	820	48		31	58
<input checked="" type="checkbox"/>	Hand-Breaded Chicken Tender's placed	    	\$6.65	620	31		41	31

The Den Menu

Set Nutritional Parameters >>

Find Copyos

Show 10 entries

Search:

Item	Allergens	Price	Calories	Carbs	Protein	Fat
<input type="checkbox"/> Bacon Avocado Club Burger Den Burger	 	\$7.45	990	54	55	82
<input type="checkbox"/> Breakfast Scramble Burger	 	\$7.29	1120	54	54	78
<input type="checkbox"/> Double Den Burger	 	\$7.72	930	27	43	41
<input type="checkbox"/> Bacon Cheeseburger	 	\$7.35	680	38	43	40
<input type="checkbox"/> Chipotle Bacon BBQ Cheeseburger	 	\$7.35	1190	74	49	80
<input type="checkbox"/> Southwestern Chicken Salad with Cilantro Lime Ranch Dressing		\$7.29	690	34	37	48
<input type="checkbox"/> Cali Chicken Sandwich	 	\$6.99	790	52	42	47
<input type="checkbox"/> Original Grand Slam	 	\$6.49	1290	600	26	52
<input type="checkbox"/> Chipotle Breakfast Burrito	 	\$6.60	1070	59	44	72




Taco Bell Menu

Set Nutritional Parameters >>

Find Combos!

Show 10 entries

Search

Item	Allergens	Price	Calories	Carbs	Protein	Fat
Bevia Taco Salad	 	\$3.50	340	75	22	35
Nachos BellGrande	 	\$4.55	740	121	35	38
Quesadilla - Chicken	 	\$4.50	500	38	27	27
Crunchwrap Supreme	 	\$4.40	830	71	35	31
Quesadilla - Steak	 	\$4.40	500	38	24	20
Burrito Supreme - Beef	 	\$3.90	390	52	26	16
Burrito Supreme - Chicken		\$3.90	370	48	18	11
Burrito Supreme - Steak		\$3.90	390	49	18	13
7-Layer Burrito		\$2.50	410	38	11	10